

CLAIMS

We claim:

1. A golf ball comprising:
a core of one or more layers;
a co-injected molded cover comprising inner, outer and intermediate layers;
the inner and outer layers of the cover comprising of a first material having at least one polymer; and
the intermediate layer of the cover comprising of a second material having at least one polymer including a foamed polymer therein,
wherein the second material has different physical properties than the first material.
2. The golf ball of claim 1, wherein the inner and outer layers of the cover have a thickness that is less than that of the intermediate layer.
3. The golf ball of claim 2, wherein the inner and outer layers of the cover have a thickness that is less than 0.015 inch.
4. The golf ball of claim 1, wherein the inner and outer layers of the cover have a thickness that is greater than that of the intermediate layer.
5. The golf ball of claim 1, wherein the inner, outer and intermediate layers of the cover are of generally equal thickness.
6. The golf ball of claim 1, wherein the first material is comprised of one or more polymers selected from the group consisting of a thermoplastic ionomer, a dynamically vulcanized thermoplastic elastomer, a functionalized styrene-butadiene elastomer, a polyetherester, a polyesterester, a metallocene polymer, a thermoplastic

polyetheramide, a thermoplastic polyester, a thermoplastic polyurethane, a ethylene or propylene based polymer, a methyl acrylate, a methyl methacrylate polymer, a polycarbonate, a polyamide, a polyphenylene oxide, a polyether ketone, a polysulfone, a acrylonitrile butadiene polymer, a acrylic styrene-acrylonitrile polymer, a terphthalate polymer, a ethylene-vinyl alcohol polymer, a tetrafluoroethylene polymer, a reinforced polymer, and blends thereof.

7. The golf ball of claim 1, wherein the second material is comprised of one or more polymers selected from the group consisting of a thermoplastic ionomer, a dynamically vulcanized thermoplastic elastomer, a functionalized styrene-butadiene elastomer, a polyetherester, a polyesterester, a metallocene polymer, a thermoplastic polyetheramide, a thermoplastic polyester, a thermoplastic polyurethane, a ethylene or propylene based polymer, a methyl acrylate, a methyl methacrylate polymer, a polycarbonate, a polyamide, a polyphenylene oxide, a polyether ketone, a polysulfone, a acrylonitrile butadiene polymer, a acrylic styrene-acrylonitrile polymer, a terphthalate polymer, a ethylene-vinyl alcohol polymer, a tetrafluoroethylene polymer, a reinforced polymer, and blends thereof.

8. The golf ball of claim 1, wherein the core is solid and comprised of more than one layer.

9. The golf ball of claim 1, wherein the core is a wound core.

10. The golf ball of claim 1, wherein the core is a dual core.

- 11.** A golf ball comprising:
a core of one or more layers;
a co-injected molded cover comprising inner, outer, and intermediate layers;
the inner and outer layers comprising of a first material at least one polymer and including a foamed polymer; and
the intermediate layer comprising of a second material having at least one polymer,
wherein the second material has different physical properties than the first material
- 12.** The golf ball according to claim 11, wherein the inner and outer layers of the cover have a thickness that is less than that of the intermediate layer.
- 13.** The golf ball of claim 11, wherein the first material is comprised of one or more polymers selected from the group consisting of a thermoplastic ionomer, a dynamically vulcanized thermoplastic elastomer, a functionalized styrene-butadiene elastomer, a polyetherester, a polyesterester, a metallocene +thermoplastic polyurethane, an ethylene or propylene based polymer, a methyl acrylate, a methyl methacrylate polymer, a polycarbonate, a polyamide, a polyphenylene oxide, a polyether ketone, a polysulfone, an acrylonitrile butadiene polymer, an acrylic styrene-acrylonitrile polymer, a terphthalate polymer, an ethylene-vinyl alcohol polymer, a tetrafluoroethylene polymer, a reinforced polymer, and blends thereof.
- 14.** The golf ball of claim 11, wherein said second material is comprised of one or more polymers selected from the group consisting of a thermoplastic ionomer, a dynamically vulcanized thermoplastic elastomer, a functionalized styrene-butadiene elastomer, a polyetherester, a polyesterester, a metallocene polymer, a thermoplastic polyetheramide, a thermoplastic polyester, a thermoplastic polyurethane, an ethylene

or propylene based polymer, a methyl acrylate, a methyl methacrylate polymer, a polycarbonate, a polyamide, a polyphenylene oxide, a polyether ketone, a polysulfone, an acrylonitrile butadiene polymer, an acrylic styrene-acrylonitrile polymer, a terphthalate polymer, an ethylene-vinyl alcohol polymer, a tetrafluoroethylene polymer, a reinforced polymer, and blends thereof.

15. The golf ball according to claim 11, wherein the core is a solid core.

16. The golf ball according to claim 11, wherein the core is a wound core.

17. The golf ball according to claim 11, wherein the core is solid and comprised of more than one layer.

18. A golf ball comprising:
a core of one or more layers;
a co-injected molded cover having inner, outer and intermediate layers,
each layer formed of a material comprising at least one polymer; and
the material of the intermediate layer containing a foamed polymer.

19. A golf ball comprising:
a core of one or more layers;
a co-injected molded cover comprising inner, outer and intermediate
layers, each layer formed of a material having at least one polymer; and
the material of the inner and outer layers containing a foamed polymer.